BADGER STATE Smoke Signals

Serving Amateur Radio in Wisconsin

Published Monthly Since 1969

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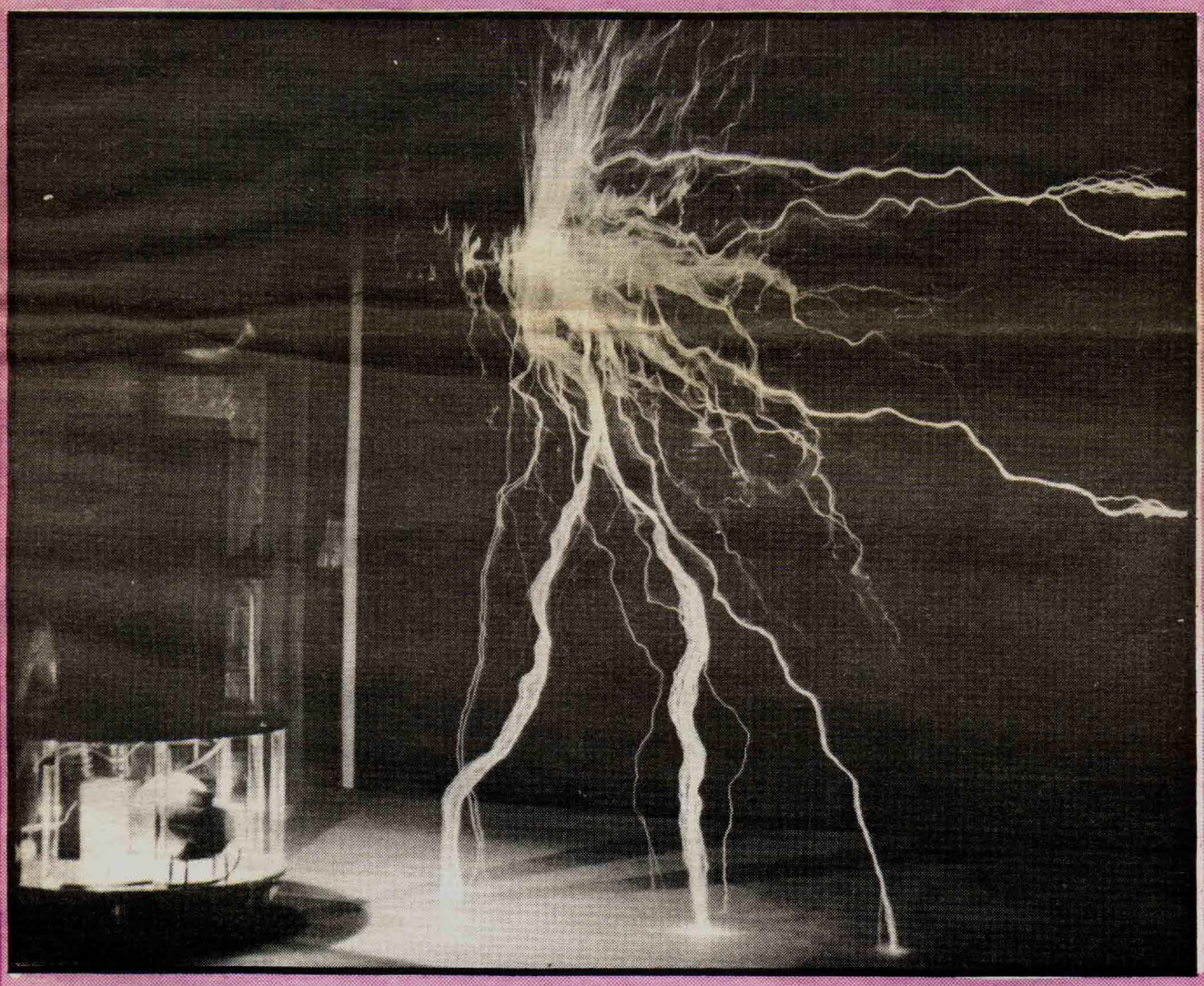
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Vol. 18 No. 9 - 213th Consecutive Monthly Issue - Baraboo, Wisconsin - September 1987

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Super Sizzling Sparks Strike Sauk County!



Many Amateur Radio operators tinkered with a Tesla coil during their younger years. Coaxing a 6-12" long spark out of a coil wound on an old cardboard carpet tube was a favorite pastime -- it sure beat doing homework or mowing the lawn!

Now, imagine a super large Tesla coil factory manufacturing Tesla coils with spark lengths from 2 feet to over 60 feet! Would you believe such a factory exists?? -- in Wisconsin, no less??

Resonance Research Corporation, under the direction of D. C. Cox (ex-WA9JDW), is located on a 10 acre tract of land approximately 5 miles north of Baraboo, Wisconsin. RRC specializes in designing and manufacturing large commercial quality Tesla coils, Van de Graff generators, impulse (surge) generators, exploding wire devices, lasers, and a host of other large scale equipment for science museums. Their equipment is shipped to museums throughout the United States, and includes installations in Boston, Denver, Trenton (NJ), Milwaukee, Memphis, and Miami.

The unit pictured on the front cover is a standard 1.5 million volt Tesla coil system which is marketed by RRC. This sys-

(Please turn to page 9)

FCC Okays Special Club Call Signs For Constitution's 200th

SPECIAL INDIVIDUAL CALL SIGNS REJECTED; ARRL PLANS CONSTITUTION CELEBRATION

In response to a petition to the (Federal Communications) Commission on the Bicentennial of the United States Constitution, ARRL has been granted official recognition for its "People to People" Bicentennial project.

The League's project includes a special celebration Worked All States Award, celebration call sign prefixes for participating club stations, and a resolution to be adopted by clubs "ratifying" the constitution.

In a May 4 letter from the Commission, staff Director Mark W. Cannon stated, "this means that the Commission has recognized this project to be of exceptional merit with national significance, and substantial educational and historic value." Cannon offered congratulations, and "gratitude for exceptional involvement in the commemoration."

Consistent with the League's celebration plans, FCC officials announced in Atlanta recently that it had accepted in part the ARRL request for special commemorative call signs. Pre-

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The opinions expressed in editorials, guest editorials, columns, and letters are the opinion of the authors only, and do not, unless otherwise stated, express or imply agreement or endorsement by Badger State Smoke Signals, or any other organization.

Swapfests and other Social Events

The Wisconsin Nets Association will hold its Annual Picnic on September 12th at Shawano County Park (near County HHH, 4 miles north of Highway 29 at Shawano Lake's north shore), with camping, swimming and boating facilities. The picnic festivities are at noon and meeting at 1:00 p.m. with door prizes, refreshments, mini-swapfest and awards later. Bring a friend or your entire family and a few junkbox items to trade. You don't have to be a traffic handler or member, everyone is welcome at the WNA picnic. (See announcement elsewhere in this issue.)

September 12, 1987. The Northern Illinois DX Association once again invites all Amateurs with an interest in DX to attend the 35th annual W9DXCC DX Convention. The location will again be at the Holiday Inn, 1250 Roosevelt Road, Glen Ellyn, IL.

September 19-20, 1987. Peoria Superfest '87, Peoria, IL. Contact: Superfest '87, P.O. Box 3461, Peoria, IL 61614.

Sunday September 20, 1987. Fall Fest sponsored by the Tri-County ARC, at the Blackhawk Technical Institute between Beloit and Janesville on Highway 51. $2.00 per person, buy or sell. Bring your own table to this outdoor event. For more information contact: Carl Searing, KW9W, 249 N. Tratt St., Whitewater, WI 53190

September 26-27, 1987. Radio Expo-87, Lake County Fairgrounds, Grays Lake, IL. Contact: CFMC, P.O. Box 1532, Evanston, IL 60204. (See announcement elsewhere in this issue.)

September 26-27, 187. Computer and Electronics Show & Sale. DuPage County Fairground, Wheaton, IL. Contact: Midwest Computer Shows, Inc. 6N351 Keeney Road, Roselle, IL, 60172. 1-800-443-8693. (See announcement elsewhere in this issue.)

Sunday, October 25, 1987. Kettle Moraine Radio Amateurs Ham, Computer, and Video Fest at Waukesha, WI. Contact: KMRA, 313 Hillview Circle, Waukesha, WI 53188. (See announcement elsewhere in this issue.)

Sunday, November 1, 1987. Late Fall Hamfest at the Lake County Fairgrounds, Grayslake, IL. Contact CAT, 637 Emerald St., Mundelein, IL, 60060

November 7, 1987. AMSAT, 5th Annual General Meeting and Space Symposium, Southfield MI. Contact: AMSAT, P.O. Box 1091, Ann Arbor, MI 48109-1091

Saturday, November 14, 1987. The Milwaukee Repeater Club is proud to sponsor the 3rd annual "6.91 Friendly Fest" from 8AM to 1PM (sellers addmitted at 7AM), at the newly-expanded Serb Hall, 51st & Oklahoma Ave. The selling halls will be located entirely on the ground floor with easy access so, rain or shine, gather up your swapfest bargains and come share our famous Milwaukee hospitality. Tickets are just $3, four-foot tables for $4. To save $1 per ticket or table, send SASE with payment to The Milwakee Repeater Club, P.O. Box 2123, Milwaukee, WI 53201, before November 7, 1987. Talk-in on 146.91 (The Friendly Repeater) and on 146.52. On-site Amateur Exams.

Sunday, November 15, 1987. 1987 Rockford Hamfest and Illinois ARRL Convention at Rockford, IL. Tickets $3.00 advance or $4.00 at the door. 8' table with 2 chairs, $5.00. Outdoor space, $2.00. For advance tickets send SASE to Rockford Hamfest, 6514 Swansdown Dr., Rockford, IL 61111. For Booth and Table reservations send SASE to Roger Sawvell, KD9MQ, 6514 Swansdown Dr. Rockford, IL 61111, or call: 815-282-1283

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebneter, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages, and/or we can include your flyers. For information on rates and requirements for our advertising pages, and/or for including flyers, please contact K9ZZ or K9EN.

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A good way to save time is to stop trying to solve problems before they arrive.

About the time a man gets his temper under control, he goes out and plays golf again.

Club Meetings

BADGER AMATEUR RADIO SOCIETY
(W9YT - UNIVERSITY OF WISCONSIN - MADISON)
Monthly while school in session - 2nd Wednesday - 7:30 p.m. - B-314, Electrical Engineering Building.

CENTRAL WISCONSIN RADIO AMATEURS, LTD.
(STEVENS POINT)
Second Wednesday.

EAU CLAIRE AMATEUR RADIO CLUB
2nd Tuesday - 7:30 p.m. - Parks and Recreation Bldg., Oxford and 1st Streets, Eau Claire. Hams, guests welcome. Travelers welcome on wide area club repeater K9UXP, 146.31/91.

FOUR LAKES AMATEUR RADIO CLUB (MADISON WI)
First and third Tuesdays - 7:30 p.m. - Red Cross Bldg., 4860 Sheboygan Ave.

FOX CITIES AMATEUR RADIO CLUB
Third Monday - 7:00 p.m. - Roosevelt Jr. High School, 318 E. Brewster St., Appleton. Info: (414) 735-6294.

GREEN BAY MIKE AND KEY CLUB
Second Thursday - Red Cross Bldg., corner Danz and Deckner, Green Bay.

GREEN FOX AMATEUR RADIO CLUB
Third Monday - 7:30 p.m. - Green Lake Town Hall, int. of county hwys. K and N.

KETTLE MORAINE RADIO AMATEURS
Second Friday.

MANITOWOC COUNTY RADIO AMATEURS
First Wednesday - 7:00 p.m. - City Hall, 817 Franklin St., Manitowoc.
Second Wednesday - Red Cross Building, 1816 Washington St., Manitowoc.

MENOMONEE FALLS AMATEUR RADIO CLUB
Last Tuesday - Doors open 7:30 p.m., meeting begins 8:00 p.m. - Security Savings and Loan, Menomonee Falls. Amateurs and guests welcome.

MILWAUKEE RADIO AMATEURS CLUB
Second Thursday - Wauwatosa Savings and Loan, 7500 W. State St.

OZAUKEE RADIO CLUB
Second Wednesday - 7:30 p.m. - Saukville Community Center.

RIVERLAND AMATEUR RADIO CLUB
First Tuesday - 7:30 p.m. - Onalaska Community Center, Onalaska WI.

ROCK RIVER RADIO CLUB
First Tuesday - 8:00 p.m. - Dodge County Sheriff's Dep't, 141 N. Main, Juneau WI.

SHEBOYGAN COUNTY AMATEUR RADIO CLUB
Second Tuesday - 7:00 p.m. - Sheboygan Red Cross/Boy Scout Bldg., 2032 Erie Ave.

SOUTH MILWAUKEE AMATEUR RADIO CLUB
First Wednesday - Legion Post 434, Shepard Ave., Oak Creek WI. Auctions in March and October.

WEST ALLIS RADIO AMATEURS CLUB
Second Tuesday - 8:00 p.m. - St. Francis Savings, 9330 W. Greenfield Ave.

WISCONSIN VALLEY RADIO ASSOCIATION (WAUSAU)
First Tuesday - 7:30 p.m. - Location varies; info on 146.04/64, Wausau.

YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO)
Days rotate: Mon., Sep. 14; Tue., Oct. 13; Wed., Nov. 11; Thu., Dec. 10. Monday meetings in room 20; all others room 25. Meetings start 7:30 p.m.

Let Badger State Smoke Signals know your club's meeting dates, and we will let our readers know of your meetings and activities. There may be Amateurs in your area interested in joining your club, or members of other interested in making an interclub visit.

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The TEST POINT

The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

September 12, 1987	Milwaukee, WI (MRAC)
September 19, 1987	Milwaukee, WI (BE)
September 19, 1987	St. Paul, MN
September 26, 1987	Wisconsin Rapids, WI
October 10, 1987	Waseca, MN
October 17, 1987	Milwaukee, WI (BE)
October 17, 1987	Rhinelander, WI
October 17, 1987	Minneapolis, MN
November 7, 1987	Richfield, MN (Robbinsdale ARC)
November 14, 1987	Milwaukee, WI (MRAC)
November 21, 1987	
December 5, 1987	Stevens Point, WI
December 19, 1987	Milwaukee, WI (BE)
December 19, 1987	Rhinelander, WI
December 19, 1987	St. Paul, MN
Monthly, First Sat.	Racine, WI
Monthly, Third Sat.	Loves Park, IL

GENERAL RULES FOR MOST EXAMINATIONS:

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walkins. Check with sponsor to find out if they allow walkins.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 22¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for $4.35 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. A copy of your license must be attached to your FCC form 610.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

MILWAUKEE METRO AREA TEST TEAM - MRAC/VEC (MRAC)

September 12, 1987. Wauwatosa East High School, 74th and Milwaukee Avenue.

November 14, 1987. 6.91 Friendly Fest, Serb Hall, 51st & Oklahoma Avenue.

Bring your original license and 2 good photocopies, a pen, and $4.35 for the exam fee. Walkins accommodated if time permits.

Register in advance on a Postal Service 14 cent postcard; print the grade of license you are applying for, your name, address, and telephone number. Send to: The Milwaukee Radio Amateurs' Club, Inc., N50 W16328 Pin Oak Court, Menomonee Falls WI 53051.

BADGER EXAMINERS (BE)

September 19; October 17; November 21; December 19.

All examinations from 1:00 p.m. until 4:00 p.m. unless otherwise noted.

Examinations held at St. Nicholas Parish (unless otherwise noted), 5353 N. Green Bay Ave., Milwaukee (2 1/2 blocks south of Silver Spring.)

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Advance registrations preferred. Contact Mickey Dolgin, KB9G, 507 E. Spooner Rd., Fox Point WI 53217. (414) 351-5311.

GREEN BAY, WI

Contact: Larry Siebers, KD9IA, 7077 Weyers Rd., Freedom, WI 54130, 414-788-3823

RHINELANDER, WI - NICOLET COLLEGE
Science Center, Fireside Room - (DeVry VEC)

Contact: Len Bauman, K9RMN, 1312 Dorothy St., Rhinelander, WI 54501, (715) 369-3296

WISCONSIN RAPIDS, WI - VOCATIONAL SCHOOL

Contact: Gene Santoski, K9UTQ, 1220 18th St., So., Wisconsin Rapids, WI 54494, (715) 423-6368

STEVENS POINT, WI - BLUE TOP INN

Contact: Joe Larson, N9JW, 644 Portage St., Stevens Point, WI 54481, (715) 344-1182

RACINE, WISCONSIN - ARRL/VEC

First Saturday of each month except during summer and the Christmas holidays.

Exams are given at the Red Cross Building, 4521 Taylor Avenue, Racine WI 53405.

Bring your original license and a photocopy of it; also bring some form of photo identification, such as a Wisconsin photo driver's license, and a check for $4.35 payable to ARRL/VEC.

Pre-registration at least 40 days before the test is desired, but walkins are permitted and will be accommodated until the extra supply of exams is exhausted.

Send pre-registration to: William R. Firchol, Jr., N9DMP, 1912 27th Street, Kenosha WI 53140.

Third Saturday of every month.

Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban Library on North Second Street in Loves Park, IL.

Contact: Gene Melton, AK9N, 2901 Billie Rd., Rockford, IL 61109, (815) 874-6867

The there were the two silkworms that had a race. Neither won -- They ended up in a tie.

MINNESOTA TESTS

Gopher/Minneapolis ARC:
Avery Finn, KØHLA
P.O. Box 53
Hopkins, MN 55343
(612) 448-5384

Robbinsdale ARC:
Ron Schaultz, NAØU
6308 Peacedale Ave.
Edina, MN 55424
(612) 920-7473

St. Paul ARC:
Jay Bellows, KØQBE
997 Portland Ave.
St. Paul, MN 55104
(612) 222-7253

LOCATIONS:

University of Minnesota Moos Hall, Washington and Union Streets, Minneapolis.

St. Luke's School, 1005 Summit Ave., St. Paul, Minnesota.

Richfield, Minnesota, Hamfest Minnesota and Computer Expo.

Waseca, Minnesota, Annual Hamfest at Senior High School.

(ed note.) Thanks to Marv Mahre, WØMGI for the Minnesota information. If you are interested in any of the Minnesota tests, we suggest that you save the above information as we may not be able to have the complete list in every issue of Smoke Signals.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examineer Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN or K9ZZ at the address shown on page 2.

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MISSELANIOUS MISCALLENUIOS MECELLANEUSS

Oh what the heck -- items of interest:

Central Wisconsin Radio Amateurs Ltd.
(Stevens Point)
WATTS SNOO

The CWRA will join in celebrating the Bicentennial of the U.S. Constitution using WB2ØØQFW as the club call. Every State is assigned a week during which their authorized stations will use the "2ØØ" number instead of the normal area number. Wisconsin's week will be May 14 to 20, 1988.

Four Lakes Amateur Radio Club
THE FEEDLINE

FLARC CELEBRATES IT'S OWN GOLDEN JUBILEE YEAR. The club was actually founded in 1933, but it didn't receive its original charter with ARRL until July 10, 1937. We have to thank Russ Bergman, W9LJR for finding the original charter, while cleaning up around his shack this spring.

No contests, no special event station, or other elaborate celebration, but we can all be proud of our club. Fifty years is not an easy accomplisment, and not every club gets this honor. It is a time to be pround and we can each celebrate the occasion in our own special way.

West Allis Radio Amateurs Club
HAMTRIX

IN SEPT. BSSS, UNDER WEST ALLIS RADIO AMATEUR CLUB HAMTRIX--THE UNFORTUNATE SOUL WAS W9YCV, NOT WA9KEC.

(continued on page 4)

Yellow Thunder Amateur Radio Club

K9ODK
WB9FDZ

The next meeting of the Yellow Thunder Amateur Radio Club will be held Monday September 14, 1987, in room 20 of the Baraboo Civic Center.

The August meeting of the Yellow Thunder Amateur Radio Club, Inc. was called to order by Vice-President, Art Kleefisch, W9WSS, at 7:50 p.m. The President was not in attendance.

The following members and guests were present:

Art Kleefisch, W9WSS	Baraboo
Harry Westlund, K9EHJ	Baraboo
Jim Decker, WB9UQT	Baraboo
Jim Romelfanger, K9ZZ	Baraboo
H. A. Reif, KA9YQP	Baraboo
Bill Klinkner	Sauk City
Duane Grotophorst, KA9HKL	Sauk City
John Imray (guest)	Baraboo
Ann Klinkner (guest)	Sauk City

The Minutes were accepted as published, on motion by H. Reif, KA9YQP and seconded by Duane Grotophorst, KA9HKL.

The Secretary read some bulletins sent to the club from ARRL.

An open discussion on the formation of a local emergency net was put forth. The Secretary will contact Mr. Timothy R. Stieve, Deputy Director, Sauk County Emergency Government, to see how we can best serve the county.

Next month, on a day to be announced, there will be a board meeting to work out the program for next year's activities.

The club had a surprise visit by Mr. John Imray, instructor in communications at the local school. This prompted further discussion on our club's cooperation with the school. We came to the conclusion, that if physically possible, the club would set up a station at the school and do an on air demonstration of Ham communications. It appears the only problem will be antenna installation. To further enhance the program, the club will send for some "Archie" comic books. The membership will also investigate the possibilities of doing the same demonstration at the Portage and Reedsburg schools.

This concluded the evenings business and the Buck Nite drawing was held and the winer was Bob Johnson WB9EIW, who was not present. Next months drawing will be $4.00.

The meeting was adjourned at 9:20 p.m. on a motion by Duane Grotophorst, KA9HKL, and seconded by Harold Reif, KA9YQP.

Respectfully Submitted,
Harry Westlund, K8EHJ, Secretary

Sentence Sermon

On the mountain of life, God's help turns stumbling blocks into toe-holds.

--Judson Graves Randolph

Birthdaze

Jermy Wight	WB9NVI	September 10
John Hansel	WB9TIG	September 16
George Halper	W9SUF	September 16
Norman Gade	K9ELK	September 22
Gordon Grant	W9ULM	September 23

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THE WISCONSIN PACKETEER (continued from page 13)

Local and Section BBS's need to be checked daily for NTS traffic. SYSOPs and STMs can't do it alone. They need your help to clear NTS RADIOGRAMS every day, seven days a week, for delivery and relay. If you are a traffic handler/packeteer, contact your Section Traffic Manager or Section Manager for information on existing NTS/packet procedures in your Section.

FO-12 BBS News.....

The FO-12 mode JD BBS has now been operational, off and on, for about 5 weeks.Here are some observations and comments from one user of the BBS:

As of the end of July, approximately 40 stations in 11 countries have made use of the BBS. With the recent appearance of CE3XK, all continents are now represented. The list below shows the calls of the stations which have sent messages on the BBS. While the large number of JA calls is certainly not unexpected, the relatively small number of W/VE and G calls, and the total absence of others such as F, ZL, etc., is rather surprising.

CE3XK DB2OS DH4KAH DL1CF G3RUH HB9MHM HB9XJ IOJX JA1NVB JA1QHQ JA2BGX JA2PKI xJA3XJK JA4BLC JA8ERE JA8TCH JE3MXU JF3KTJ JH1DWU JH1DWU JJ1ZUT JL3SHC JR3FRF JR4BRS JR5EBL K7PYK KA9LNV ON4DY ON5PV ON6CK ON6UG VE3JF VK2ZDE VK3DTO VK5AGR VK5ZK WA4EJR WA8EBM WB5IPM WB7QKK ZS6IT

Thus far, nearly all of the messages on the BBS have been short greetings between the stations accessing the satellite. Very little traffic of the type that flows between the auto-forwarding terrestrial BBS stations is evident; this is probably due to uncertainties about the satellite's operating schedule and what stations are actually active on a regular basis, not to mention questions about third-party traffic legalities and the fact that most of the folks using the satellite are not also BBS operators. The uncertainty surrounding the operating schedule has been dispelled recently with the posting of a schedule through to Sept. 9. The limited access time, due to power budget problems and time alloted to mode JA operation, is something we will have to live with. To put this in perspective, consider that mode JD (i.e., the BBS) is scheduled to be operating on a total of 7 days during the month of August, and during those days it will be cycled on/off at 2-hour intervals. This gives a station on the ground a maximum of about 6 hours access time for the whole month, or less than 1% of the time that a geostationary satellite would be available. Moreover, there are gaps of as long as 9 days in the schedule, so the time delay in delivering a message can be considerable; also, it seems that the onboard computer is powered down during some of the off periods, and all of the messages on the BBS get dumped.There is also no way of telling whether a destination station has actually received your message, unless he sends you a separate message of confirmation.

In short, the limitations will make it challenging to use FO-12 for any sort of serious message forwarding. Nevertheless, it is an extremely useful test bed for packet linking by satellite; and, the limitations just mentioned aside, the FO-12 hardware and BBS software have been functioning superbly.The satellite has been used for some fairly lengthy file transfers between the DF3AV and VE3JF BBS's, with no problems whatsoever encountered. Now that the first batch of TAPR PSK modem kits has been shipped, there should soon be a considerable increase in the number of FO-12 BBS users. Stay tuned!

73, Barry VE3JF @ VE3JF

FREE WANT ADS in BADGER STATE SMOKE SIGNALS

Yes, they are FREE. BSSS will run your WANT AD listing Amateur Radio related equipment you wish to buy, sell, trade, or whatever. Non-commercial listings only. Length and number of free ads may be subject to space limitations. We reserve the right to refuse any listing that we feel is inappropriate. Send to Kenneth A. Ebneter, K9EN, 822 Wauona Trail, Portage, WI 53901.

FOR SALE: KLM PA 10-40B 2-meter power amp. 10 watts in - 40 watts out. First $40.00 takes it. Paul R. Goemans, WA9PWP, 4326 Clover Ct., Madison, WI 53711.

FOR SALE: Wilson Model T-45 Tubular crank-up tower, $150.00. Jerry Jetzer, WB9TKO, Sheboygan, (414) 452-3635.

WANTED: Radio Shack DX300 or 301 short wave receiver. Jerry Jetzer, WB9TKO, Sheboygan, (414) 452-3635.

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(continued from page 3)

~~MISSELANIOUS MISCALLENUIOS MECELLANEUSS~~

Oh what the heck -- items of interest:

West Allis Radio Amateurs Club
HAMTRIX

A real good sporadic E opening occured just prior to the CQ WPX VHF/UHF contest on July 17th. This 2 meter opening was to the Maine and New Brunswick Canada area and took place from about 2015Z to 2040Z. Grids worked were FN43, 54, 55, and 65. Then amazingly it shifted to Texas about 2220Z and lasted until about 2250Z. Five stations were worked in Texas in grids EL09, EM11 and 13. This activity was on SSB and signals were S9 or better. DE W9YCV

Our thanks to the above mentioned clubs and their bulletins for the information presented. Badger State Smoke Signals will be pleased to exchange bulletins and information with your club. Please contact K9ZZ or K9EN.

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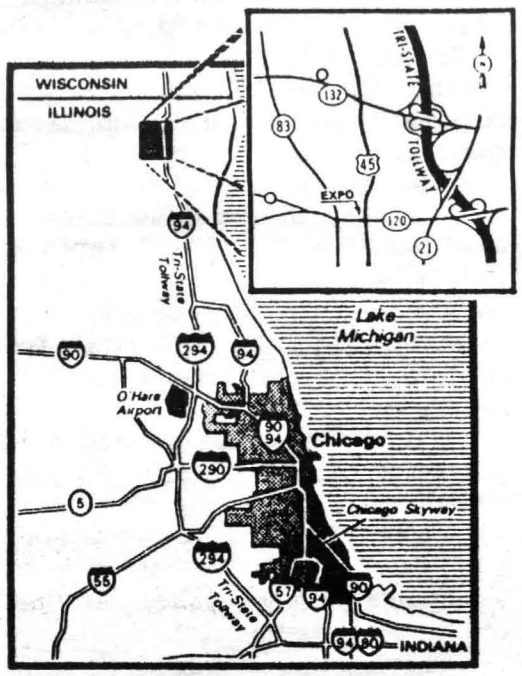
Two Hams were trying to measure a flagpole they wanted to use for an antenna. After they had made guesses, that differed considerably, a bystander asked, "Wouldn't it be better to pull out the pole, lay it down on the ground, and measure how long it is.?
"No," one of the men said as he stared in disbelief, "We're trying figure out how tall it is, not how long."

RADIO EXPO 87

SATURDAY & SUNDAY SEPTEMBER 26th & 27th

Sponsored by
The Chicago FM Club

LAKE COUNTY ILLINOIS FAIRGROUNDS RTS. 45 & 120 GRAYSLAKE, IL



Flea Market Open 6am—6pm

Exhibits Open 9am—4pm

Displays of the latest radio equipment from major manufacturers.
Technical seminars & discussions with FCC & ARRL speakers.
Home computer technology displayed by major distributors.
Thousands of dollars in prizes with drawings every hour each day.
Limited indoor flea market tables available.
Free camping & parking. Full food service available.

****** LADIES PROGRAM ******
****** DOOR PRIZES ARTS & CRAFTS ******

GENERAL ADMISSION AT GATE $5.00

********** CLIP HERE **********

Please send the following;
_____ Advance Sale Tickets - $4.00 good for both days.
Children under 12 free

_____ Table reservations at $7.50 per day (8ft. long)
_____ Saturday _____ Sunday

_____ Electricity available $4.00 per day.
_____ Saturday _____ Sunday

NAME _____ CALL _____

ADDRESS _____

CITY _____ STATE __ ZIP _____

Return to CFMC - P.O. BOX - 1532 EVANSTON IL. 60204
Please send along a stamped, self addressed envelope.



QCWA — WISCONSIN CHAPTER 55

Yuki Minaga, W9DU, Wisconsin Dells, received QCWA Golden Anniversary and 50 Continuously Licensed Certificates from Rich Regent, K9GDF, chapter treasurer and ARRL SM for Wisconsin, at the chapter's dinner in June.

- W9YCV photo

BADGER EXAMINERS

The Milwaukee-based Badger Examiners gave Amateur examinations at the South Milwaukee Amateur Radio Club's Swapfest, held in July in Oak Creek. Of 30 examinees, 24 passed and six didn't make it, for a passing average of 80%.

-- Mickey Dolgin, KB9G

HAM RADIO VIDEO PREMIERES SEPTEMBER 20

Get your home satellite receiver and VCR ready for the World Premiere of a new videotape, The New World of Amateur Radio.

The one-hour program will be uplinked at 6:00 p.m. EDT (5:00 p.m. CDT) September 20 on GTE Spacenet 1, Transponder 12H. On most home satellite receivers the show will be on Channel 23. Audio will be stereo/compatible monaural with subcarriers listed on-screen just prior to the start of the show, so tune in early.

The complete program includes a 10-minute introduction, the 28-1/2 minute main presentation entitled The New World of Amateur Radio, followed by some special related material.

Presented in a fast-paced TV magazine format, the show portrays the excitement and person-to-person contact that only Ham Radio can provide. The ARRL, which helped produce the show, expects it to be an outstanding recruitment tool.

Viewers will see Joe Fairclough, WB2JKJ, New York City teacher whose junior high class - "The Crew at 22" - learn vocabulary in Morse code. Ham instructor Gordon West, WB6NOA, is shown conducting a code class the way Seiji Ozawa conducts the Boston Symphony Orchestra. Astronaut Tony England, WØORE, the first Ham to send pictures via Amateur Radio to and from space, walks the viewer into the future of Ham Radio while inside NASA's new space station simulator in Houston. And there's footage of foxhunters in China, Hams Dick Rutan and Jeana Yeager, who made aviation history aboard the Voyager, a DXpedition to Heard Island and inside looks at the 1987 Dayton Hamvention and an ARRL Board of Directors meeting.

The League produced the videotape in cooperation with Kenwood, ICOM and Yaesu. It was put together under the guiding hand of Roy Neal, K6DUE, the former NBC News Science Editor who is best known for his coverage of the manned space program. Frosty Oden, N6ENV, a videotape editor for CBS-TV in Hollywood, served as Producer and Editor, while Bill Pasternak, WA6ITF, a broadcast engineer with Fox Television in Los Angeles, was Associate Producer and Technical Supervisor. Principal cameraman was George Barker, NA1F, a news photographer for WVIT-TV in Hartford. The original score was written and performed by John Tesh, co-anchor of "Entertainment Tonight."

ARRL is encouraging extensive use of the video to introduce Ham Radio to groups of all ages and backgrounds. It is available on the September 20 satellite feed and on a free-loan basis to all ARRL-affiliated clubs and other interested organizations. Copies of the 28-1/2 minute video may be ordered by individuals and organizations for their own use for $20.00 prepaid from ARRL, Box NW, 225 Main Street, Newington CT 06111.

The August meeting of the Riverland Amateur Radio Club was called to order by President Gary, NI9V, at 7:30 p.m.

A motion for acceptance of the minutes as published in Smoke Signals was made by Dick Low, KØJYB, and was seconded by Walt Altus, WD9GCR. The motion passed.

The Treasurer's report was given by Sec.-Treas. Dick, KØJYB as: $212.01 in the checking account and $270.10 in the savings account, for a total balance of $482.11.

The Secretary had no communications.

OLD BUSINESS

Craig, N9ETD, reported that the Field Day results were sent in and would appear in QST November issue. The radio call in lasted one half hour and one club member called in as did several people asking about interference with their T.V. and radio sets.

37/97 REPORT

Van, WA9FIO, showed us a new hard line cable section and connector to be used between the present hard line cable and the antenna. One is being made for each antenna and possibly the climber will be in town next week end for installation.

JACKETS

Craig, N9ETD, informed us of the closing of the company that was in the process of printing logos on our jackets. Fortunately Craig did not pay them in advance and we still have our money. Craig will try to obtain the silk screens or stencils from the co-owners of the company and will look for a new source.

SWAP FEST

Our local Swap Fest will be held September 12, 1987 in the Onalaska Community Center from 8 a.m. to noon.

PROGRAMS

A discussion was held regarding programs for the club meetings. Rick, KV9U, suggested show and tell type demonstrations with our ham radio projects and mini swapfests. Someone mentioned the possibility of a visit to channel 25 T.V. station as Tim Stoffel, NS9E works there. Another idea was to have a person from a local corporation explain their computer and price scanner operations to us. Greg, KA9FOZ reminded us that programs should really be planned one year in advance.

There was no report on the Ch. 8 film.

NEW BUSINESS

Wid, W9DM, told us of his misfortune of losing all of his ham gear in a lightning strike. He wanted to give a very special thank you to Tim Stoffel, NS9E, for repairing his Kenwood transceiver and getting him back on the air. Wid is extremely grateful.

Van, WA9FIO, suggested that we have an inventory of our club items or equipment such as the 37-97 repeater, RTTY and field day equipment. We would then know what our resources are.

Craig, N9ETD, is looking for an old military field box, as our field day box is falling apart.

Bill, WB9VYI, has located a 1000 watt generator priced at $50. No club action was taken.

Vice President Charlie Burch, KA9UUK, is out of intensive care and would like to have visitors at Room 305 in the St. Francis Hospital.

The meeting was brought to a close at 8:15 p.m.

Respectfully submitted:

Dick Low, KØJYB

MEMBERS PRESENT

Karl L. Olberg	W4ST
Laurence A. Knutson	W9SFL
Rick Williams	KV9U
Walter Altus	WD9GCR
Herman Ludvik	W9HJV
Bill Winder	K9EGQ
Jack Yoshizumi	W9KTD
Greg Miller	KA9FOZ
Mike Tessmer	NØBSH
Craig Goldbeck	N9ETD
Bill Wood	WB9VYI
David Bauer (visitor)	KA9ONB
Wid Johnson	W9DM
Maty Johnson	XYL W9DM
John C. Young	W9KAZ
Bob Pluntz	WD9FKV
Gary L. Webb	NI9V
Dick Low	KØJYB
Tom O'Brien	WB9BJQ
Jim Burcum	K9LBX
Al Reinholz	N9FZE
Dennis Sinner (visitor)	KA5RXX
Van Elston	WA9FIO

(Your BSSS Editor extends apologies to Art, WØJDC, for typing in his call last month as WOJDC. Without the diagonal, WOJDC looks more like a very hard to pronounce word than a call sign. Actually, my computer ran out of diagonals. I picked up a new bucket of them a week ago, and now have a plentiful supply of them. However, I see I'm now low on ampersands and octothorpes. Does anyone have some used ones I can buy? -- K9ZZ)

ARRL CONSTITUTION CELEBRATION

(Continued from page 1)

registered Amateur Radio clubs will be permitted to replace the numeral in their call sign with the numeral 200 for a designated one week period corresponding closely to the date of entry of their state into the Union. However, the portion of the request concerning permission for individual amateurs to use special numerical designators was not accepted.

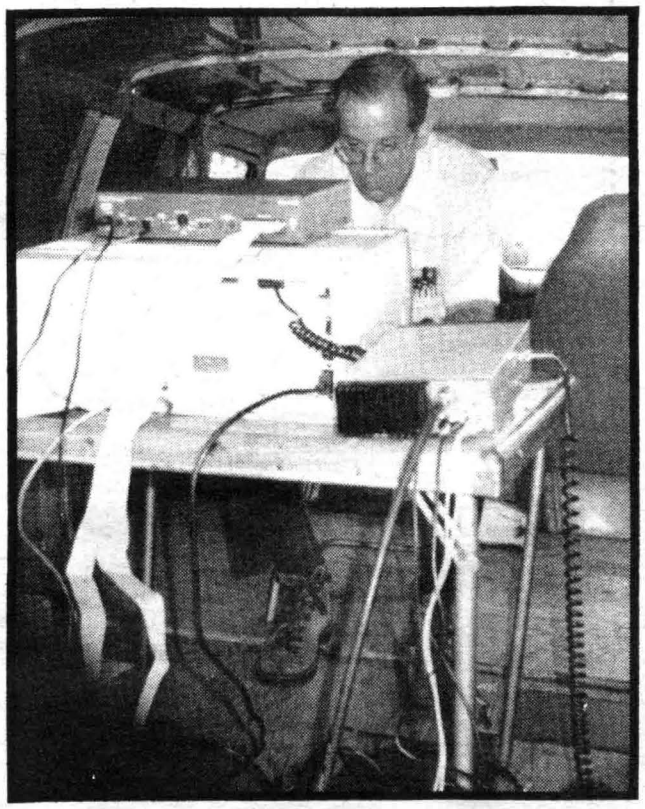
Complete details on the operating activities sponsored by the League for the Constitutional Bicentennial will appear in a comprehensive article in September QST. (Further information will also be carried in future issues of Badger State Smoke Signals).

(From the ARRL Section Leader)

Editor's note: Wisconsin was admitted into the Union on May 29, 1848, meaning that some time around the end of May, 1988, we should have our one-week turn with the special club call signs.

-- K9ZZ/K2ØØODK

HERE and THERE



Jim Decker, WB9UQT, of Baraboo, shown here operating Field Day at the Yellow Thunder ARC site, serves most capably as Treasurer for BSSS, as well as for YTARC and others. K9ZZ photo

THE KETTLE MORAINE RADIO AMATEURS

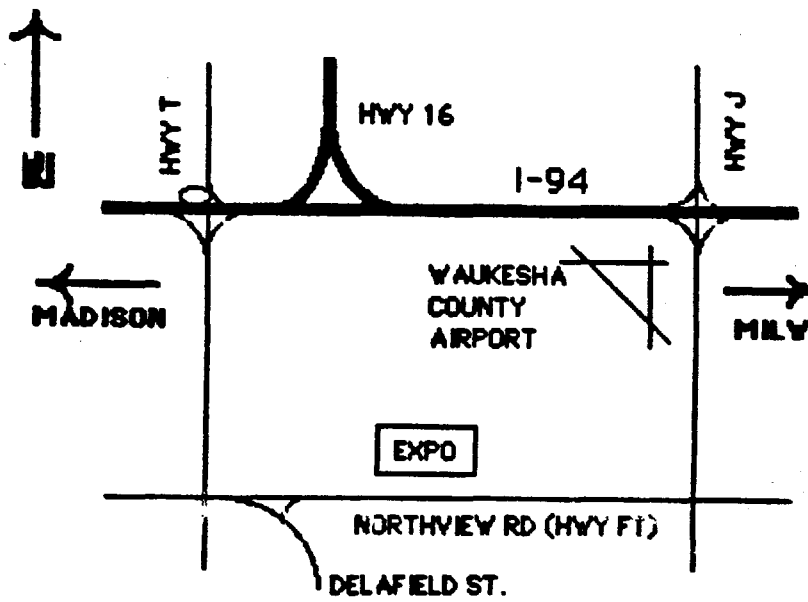
PRESENTS

SUNDAY, OCTOBER 25, 1987

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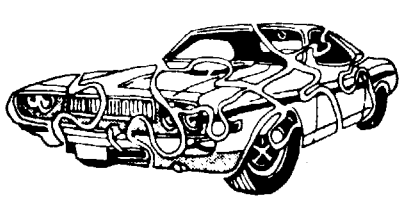
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CHEAP ELECTRIC POWER?

(From The GEARVAKf Bulletin, Spring 1987)

Electricity may be no bargain when it comes at too low a cost, a recent study says. GEARVAKf researcher, Dr. K. Eelo Uwaht, has found that low-cost electricity, generally generated by federal projects, can cause excessive damage to electronic equipment. Dr. Uwaht disassembled failed transformers in several transceivers and inside found accumulations of residual eddies and flux densities that had caused the transformers to fail. In several other cases Dr. Uwaht found semiconductor failure from P-type holes clogged by excessive sines from low-cost power. As Dr. Uwaht expresses it: "You get what you pay for in electricity, just as you do in tuba repair."

-- N8JR

BSSS CLUB DEAL

Let Badger State Smoke Signals serve your club's members as your club's newspaper. The cost to your club is as little as $4.20 per member per year (that's as low as 35 cents per member per month). Your club's minutes will be published for you monthly, along with other items of interest which you submit for publication, including photos. You also get all the other news and information contained every month in BSSS. For full information and requirements, contact Ken Ebneter, K9EN, 822 Wauona Trail, Portage WI 53901, or call Ken at (608) 742-3560.

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Hi-Tech Fair Includes Ham Radio

On March 7, 1987, the Abbotsford (WI) High School VICA chapter sponsored its first annual Hi-Technology Fair at the school.

The fair boasted over 30 exhibitors, including several schools and businesses. Attendance at the event was over 1100 people.

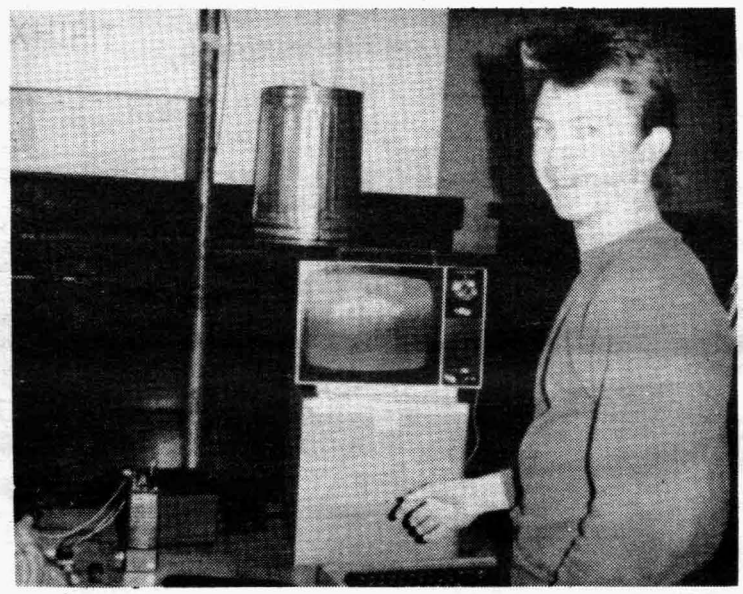
An Amateur Radio exhibit, sponsored by the Dairyland Amateur Radio Club, and organized by N9GHZ, was set up at the fair. The exhibit included a working packet radio station on 2 meters, 2-meter voice, and a videotape of Amateur slow-scan TV pictures transmitted by WØORE from the space shuttle Challenger in 1985. Also included were displays of foreign QSL cards and displays explaining the Ham-in-Space program and Skywarn and the ARES. ARRL handouts were available. The exhibit received some coverage in the Abbotsford Tribune-Phonograph.

N9GHZ, KA9SMQ, N9FZS and KA9UXN helped man the booth during the fair. Those helping to set up and take down the exhibit included N9GHZ, KA9UXN, N9FZS, KA9WDC and WA9ZCO. Those who borrowed items that were used as part of the exhibit included KA9UXN, WA9ZCO, WA9YCT, N9GHZ, WD9FWP and WA9ZPC.

In the top photo, shown manning the booth are Scott Young, N9FZS (rear), and brother Dean, KA9SMQ. In the bottom photo, Scott, N9FZS, checks the packet station. Scott is the winner of the 1986 ARRL Hiram Percy Maxim Award.

-- Mike Schoenfuss, N9GHZ





Ask Uncle Clyde



Clyde Downing

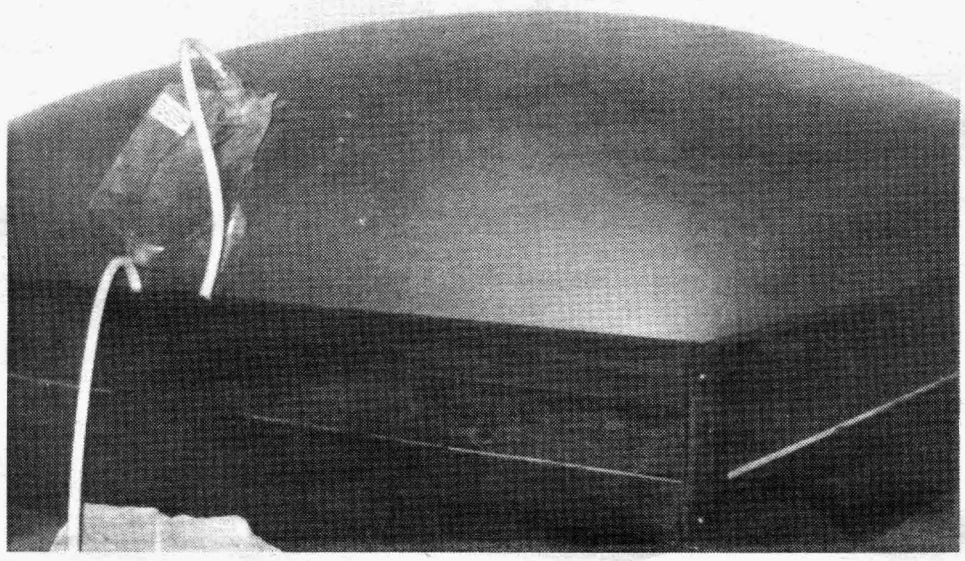
W9HSY

Dear Uncle Clyde:
A friend told me it's OK to fill my waterbed while I run errands. I'm not so sure. Is she right? Sign me..

Curious

Dear Curious: To start a flood, run errands while your waterbed fills. I tried that once, and here's a picture of how it looked when I came home. Your friend is all wet, so to speak.

Uncle Clyde



Aerotron: Those Darn Hams!!

- News/Comment from
The Westlink Report -

Aerotron, Inc., the principal factor outside the FCC's own Office of Science and Technology attempting to reallocate the lower 40% of the 1 1/4 meter band to land mobile use, has taken to name calling in its battle with radio amateurs.

In a portion of the company's reply comments on Docket 87-14, Aerotron leaves no room for imagination when it declares:

"Aerotron believes the many comments filed by or on behalf of the Amateur Radio Service licensees represent the bias of one user group only, and that, overall, they are extremely shortsighted. The Notice gives the amateur community a permanent place for them to expand their use. Now is the time to reallocate the 220 - 222 MHz spectrum while it is lightly used, not five years down the road when the amateurs may have made significant investments in equipment but still not be making an efficient use of that portion of the spectrum."

Aerotron's attack on the integrity of members of the US Amateur Radio Service does not end there. Obviously concerned that their attempt to appropriate that which is ours might fail, the company ends its reply comments to the FCC thus: "As the Commission is well aware, it is typical in allocations proceedings affecting the Amateur Service for the Commission to inundated with mostly brief and conclusionary comments from amateurs who resist any change in the rules, however slight, that they see as adverse to their interests. Such is the case in this proceeding. Aerotron is confident that the Commission will see through such tactics and that it will preserve its proposed reallocation."

(**Westlink Report** Editor's and Publisher's note: Sounds a little like gasps of defeat to us. Hopefully, the Commission will remember that the "light loading" of this spectrum, which is significantly heavier than the likes of Aerotron would have for the better part of a decade, is due chiefly to earlier questions of reallocation. When these petitions were put to rest, the major manufacturers all went to work and produced some very fine equipment which just happens to be selling like hot cakes. There are several places in the country where loading on 220 is approaching that of 2 meters. While most of this is repeater activity on the upper 3 megahertz, loss of the bottom 2 would be the death sentence for any number of advanced technique experiments.

-- DE WA6ITF and WB6MQV)

SAUK COUNTY SPARKS

(Continued from front page)

tem is powered by a 240 volt, 60 Hz, single phase "pole" transformer operated in reverse to produce a 14.4 KV charging potential for the large capacitor bank. The capacitor bank consists of a pair of .025 MFD, 35 KV energy discharge capacitors connected in parallel. This energy discharges thru a high speed 5,000 RPM rotary sparkgap powered by a 3/4 HP electric motor. The energy flows into a 4-turn 1/2" OD copper tubing primary coil. Due to the maintenance of a high Q (quality) factor, the peak current is 2,300 amperes for a time period of 5 microseconds! Resonant voltage rises to approximately twice the applied RMS potential of the pole transformer, i.e., 29 KV.

The secondary inductor is wound with nearly 1/2 mile of a special silver-tinned 12 AWG PVC insulated wire with a working voltage of 3,500 volts per turn! The large diameter and high Q factor preserved in the secondary inductor design produces over 1.5 million volts at 35 amperes (RMS) for a time period of 15 microseconds. The waveform is quite similar to the dampened oscillation produced by a TV "flyback" transformer.

Operating frequency is usually around 170 KHz for this model. Other units operate at both higher and lower resonant frequencies.

With all this power and energy, you might think TVI and RFI would be a serious problem. Designer D. C. Cox informs us all his systems are carefully designed and manufactured especially to prevent RF interference. Most 1/4 wave antennas are tuned for very low SWR for radio operation. Low SWR produces maximum radiation with minimum potential rise in a 1/4 wave radiator. Tesla coil systems are tuned for very high SWR to insure very low radiation and maximum potential rise on the secondary inductor. These tuning techniques serve to minimize radiation and produce spectacular high potential discharges.

RRC also utilizes several stages of line filters, hash filters, and varistors in their control systems and pole transformers to filter out RF kicked back into the power line. In fact, there is a 1.5 million volt Tesla coil operating in Milwaukee just down the hall from a room full of IBM computers keeping track of all the city and payroll records with no interference! Such spectacular interference-free performance and attention to detail is a cornerstone of RRC's success.

The Model 150 unit depicted on the cover produces spark discharges in the 7-10 ft. long range and is coupled with a special RRC-developed written script to produce a 30-45 minute program designed for maximum visual and audible effect on the museum audience. Witnessing a 1.5 million volt Tesla coil running at full power usually leaves a lasting impression if you're sitting only 20 feet away!

(For more information about Tesla coils or other items, or about Resonance Research Corporation, write them at Route 1, Shady Lane Road, Baraboo WI 53913.)

(EDITOR'S NOTE: D. C. Cox has always had a flair for the spectacular. Even as a teenager, his North Freedom neighbors sometimes heard strange noises emanating from the Cox home; sometimes outside the home, too. I became certain he would go far after I heard he had built a small Tesla coil, using a homebrew glass plate capacitor. The family's cat jumped on the glass plate capacitor, destroying the capacitor. That didn't do the cat a lot of good either, since the cat caught on fire, giving new meaning to the phrase, "Please put the cat out."

D. C. has indicated some interest in getting an Amateur license once again.

D. C. sometimes schedules Open House at his factory. If he sets one up this year, it will be in mid-Autumn. We'll let you know.

Our Tesla coil story was written by D.C. Cox, at our request.)

-- K9ZZ

PROPAGATION PREDICTIONS



BY Woody Minar K9EF
13508 Tabscott Drive, Chantilly, Va. 22021

Monthly fluctuations have been very pronounced since April, 1987, with monthly peaks occuring on April 16 (105), May 19 - 22 (98), June 24 (86), and July 23 (112).

The 2800 MHz solar radio flux went over 110 on July 23, 1987 for the first time since June 15, 1984, when it reached 113 - the downward side of Cycle 21.

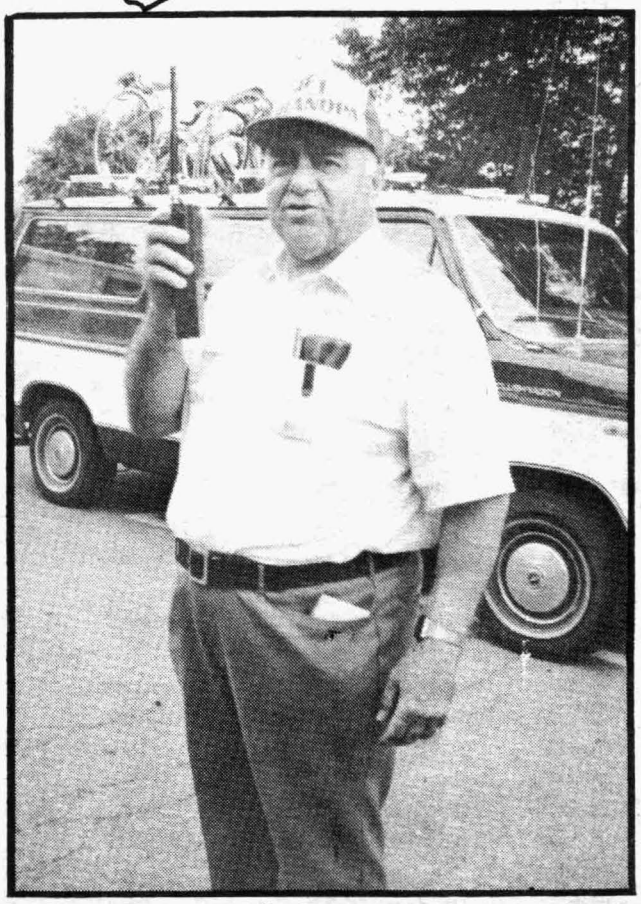
Good days for propagation: Sept. 16 - 18, Sept. 30 to Oct. 2, and Oct. 14 - 16.

Bad days: Sept. 10 - 11, Sept. 23 - 24, and Oct. 7 - 9.

73, Woody

WANTED: General coverage short wave receiver with digital readout. (608) 356-3188, ask for Bob Lee.

HERE and THERE



Ralph Andrea, WØFCO, above, of St. Paul, Minnesota, is a past President of the Saint Paul Radio Club. He also works with the Handi-Ham System at Golden Valley, Minnesota, and is an active instructor of Novice students taking courses offered by the Saint Paul Radio Club. And, of course, he is a #1 Grandpa, as his cap says. We grabbed this photo of Ralph when he was in Baraboo in July.

-- K9ZZ Photo

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John's Junk Box

By John W. Frank, WB9TQG
P. O. Box 5113
Madison WI 53705

THE MULTI—PURPOSE SPEAKER SUBSTITUTION BOX

Every once in a while, I need a speaker to temporarily substitute for a speaker I suspect is defective, or to connect to an experimental circuit on my workbench. The multi-purpose speaker substitution box meets these needs and prevents my workbench from becoming so covered with wires that it looks like an Octopus convention.

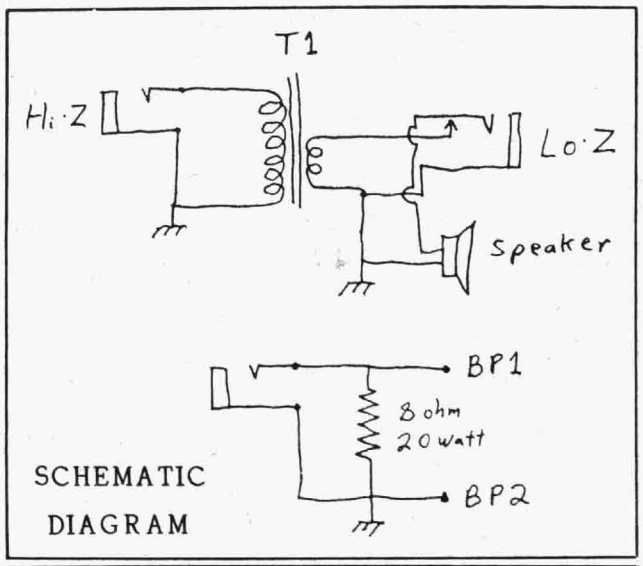
Using a box with a metal cover simplified construction for me. However, one end of each transformer winding and one end of the dummy load are grounded through the phone jacks. If you plan to use this device with equipment where neither side of the speaker is grounded, you may want to insulate the jacks from the chassis, or build the circuit in a plastic box.

The operation of the circuit is very simple. If you need a low impedance speaker, plug into the jack labelled Lo-Z. If you need a high impedance load, plug into the jack labelled Hi-Z. The exact values of impedance will depend on the impedance of the speaker and the turns ratio in the audio transformer, T1.

If you need to maintain a load on the output of an audio circuit but don't want to listen to a speaker, use the audio dummy load by plugging into the jack labelled "dummy load." Why, you might ask, are there binding posts in parallel with the phone jack for the dummy load? The binding posts provide an alternative means of connecting to the dummy load or, if you plug the audio source into the dummy load jack, the binding posts provide a convenient place to connect a voltmeter, oscilloscope, or frequency counter. If needed, another binding post could be connected to the hot side of the speaker voice coil to facilitate measurements made there.

The size of the jacks isn't critical. I used 1/4 inch jacks because they were in my junkbox. 1/8 inch jacks should also work just fine. The audio transformer T1 is an output transformer from an old transistor radio. The 8 ohm resistor I used in the dummy load is a non-inductive power resistor. Try to avoid the use of wirewound resistors in audio circuits. The inductance of the wire can introduce inductive reactance into audio circuits.

73, John, WB9TQG



SCHEMATIC DIAGRAM

PARTS LIST

2 open circuit phone jacks
1 closed circuit phone jack
1 audio output transformer
1 speaker
1 8-ohm 20 watt noninductive resistor
1 red binding post
1 black binding post

OOPS!

The following are corrections to items carried in August, 1987, **Badger State Smoke Signals:**

In the listing of Silent Keys in the Quarter Century Wireless Association column on page 11, the first listing should read Carl Lindstrom, W9JSF (not George Lindstrom).

In the Great Circus Train Hams photo caption on page 12, Lloyd Gorsiski's call should read WB9RGO, not WB9RGU. (It's hard to write legible notes on a rocking, rolling train ride!)

We apologize for the errors!

THE WALLEYE NET PIE BAKEOFF: WINNERS ALL!!

A few issues ago, we told you about the Great Walleye Net Pie Bakeoff, to be held at the South Milwaukee Swapfest. The results are in! Here's what Ole Fox, K9AKG, says:

"The Oak Creek Swapfest has come and gone, and what a great Swapfest it was.

"The Walleye Net gang had a wonderful time with the bakeoff. W9VST (Norm) realized he could not win in the apple pie contest with W9OVZ (Bill), so he made blueberry pies, which were delicious topped with K9AJF (Bill's) ice cream.

"The apple pies were just great. W9OVS (Bill) surely knows how to make top-notch pies.

"W9MNX (Bernie) made his famous cheese cake, which earned him high honors and a high demand for the recipe.

"WD9BCP (Glen) treated with cheese, which all enjoyed. It was the first taste of goat cheese for several of us, and to our surprise, it was very good.

"The net started talking and planning for the next Oak Creek fest as soon as the following week.

"We all extend our many thanks to the South Milwaukee Amateur Club, Inc., and American Legion Post 434 for the great swapfest, the shelter, happy time and fine bar and restaurant. We look forward to seeing the many friends next year."

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50—YEAR PLAQUE AWARDED



Clayt Cardy, W9OVO, Sturgeon Bay, WI, (right) recently received his ARRL 50 year plaque from Wisconsin ARRL Section Manager Rich Regent, K9GDF.

-- Photo by Les Peterson, W9YCV

Your subscription to **Badger State Smoke Signals** would be appreciated!

Eau Claire A.R.C.

NOTICE TO MEMBERS
OF EAU CLAIRE ARC

The question of the purchase by the club of a trailer for use in emergency communications will be discussed at the September meeting. All members are encouraged to attend so that the matter may be discussed thoroughly. It is anticipated that one or more motions on this matter may be presented.

-- Robin NI9R -- Sec. EARC

NEXT MEETING

The next meeting of the Eau Claire Amateur Radio Club will be on Tuesday, September 8, at 7:30 p.m. at the Eau Claire Parks and Rec. building. Lunch committee: Steve KD9YO, Layne KD9OB and Darold N9FLK.

AUGUST MEETING SUMMARY

The meeting was called to order at 7:30 by President Spratt. The minutes were approved as published in BSSS. The treasurer's report was approved as read; net profit from the Hamfest was $342.46.

OLD BUSINESS

John KA9VUE reported on the final arrangements for the club picnic Saturday August 15 at Riverview Park. Starting time is 10 a.m. with mealtime at 1:00. Bring your own utensils and a dish to pass.

Layne KD9OB reported that the trailer committee has gone no further since last meeting. He suggested we encourage discussion of the trailer question between now and the September meeting in hopes that a decision as to what to do might be made at that meeting. A motion was presented that a prominent notice be put in BSSS alerting members that the trailer will be discussed at the September meeting, that all members are encouraged to attend and that a vote is anticipated. The motion passed and the Secretary was instructed to write such a notice for insertion in BSSS.

NEW BUSINESS

The question of the club's providing communications for the Buckshot Run was brought up. The Public Service Committee chairman was not present and no one knew if a request had been made to the club or any arrangements made.

Darold N9FLK suggested some sort of identification be put on cars used by SKYWARN spotters. This prompted a general discussion of the value of prominent identification for radio amateur's vehicles - especially when engaged in public service and emergency communications. Several possibilities were discussed including signs and decals available from the ARRL and commercial magnetic signs. KD9OB will look into the price and availability of magnetic signs and KA9LJK will see what the League has to offer.

ANNOUNCEMENTS

LJK reminded members of the Rochester club's pie and ice cream social to which we are invited. It is in Rochester at Silver Lake Park on August 16 at 7 p.m.

NI9R summarized a news release from the ARRL concerning the premiere of their new video promoting Amateur Radio. It will be broadcast via satellite TV and it is hoped that some member with the capability to tape it will do so.

NI9R reported on activities at the station at Sacred Heart Hospital and announced the next scheduled session on August 18 at 3:30.

A question was raised concerning the 88 repeater in Chippewa Falls. It is apparently covering only a small area as presently set up.

The meeting was adjourned at 8:05 p.m. at which time lunch was served.

Respectfully submitted:

Robin NI9R -- Sec. EARC

WPDR 1350 WDDC FM100
PORTAGE, WI

220 Update

On July 31, the ARRL filed over 30 pages of supplementary reply comments in FCC Docket 87-14, the proposal to remove 220-222 MHz from the Amateur Service.

The League's comments concentrated on several areas that had not been discussed in its previously filed reply comments. **The most important of these was a long discussion of why other amateur band allocations were not suitable or available substitutes for 220—222 MHz.**

The ARRL's filing discusses the following points, among others:

Section 97.86(d) of the FCC rules limits auxiliary stations to frequencies above 220.5, and exempts 431-433 and 435-438 MHz from such use. Thus, amateur bands on HF, 50-54 MHz and 144-148 MHz are not available to accomodate the auxiliary stations which would be displaced. Other factors, and saturation of the 144-148 MHz band render those bands unreliable or unusable.

420-450 MHz is allocated to U.S. Government Radiolocation, and is secondary to amateurs; it is also saturated in parts of the U.S. These and other factors rule out this band for use by displaced 220-222 MHz amateurs.

902-928 is precluded for use by displaced 220-222 MHz amateurs by propagation limitations, by a complex allocation system, and other factors.

The above was excerpted from **The ARRL Letter.**

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356-7718

ARRL Files Comments in Call Sign Inquiry

The ARRL has filed comments in PRB-3, the FCC notice which inquired if the private sector could establish a program to grant requests for specific amateur call signs.

In the comments, the ARRL emphasizes that the Commission should administer any call sign program. The ARRL strongly believes that the assignment of call signs is a governmental function, which should not be relinquished, or contracted away, by the FCC. The League concludes this section of its comments by saying: "Here is an opportunity for the Commission to undertake a program not presently performed, the cost of which can be offset by fees charged to those who choose to avail themselves of it, and which will result in satisfying a previously unmet demand. At the same time, the Commission's provision of the service will establish a continuing interest in amateur radio and promote, as a result of that expression of interest, a renewed incentive for self-regulation and administration of the Amateur Radio Service overall by amateurs".

However, if the FCC would not conduct such a program, then we would do so under certain conditions. First, only a single entity must administer the program. In order to have multiple special call sign coordinators (SCSCs), real-time coordination would be needed to prevent risk of duplication, thus increasing the cost of the system and increasing the possibilities for errors. The ARRL is the logical choice to assume this exclusive role. The ARRL is the only national Amateur Radio organization and has a staff of more than 100 employees, that works daily with the Commission for the promotion and advancement of Amateur Radio and is familiar with the amateur call sign assignment system.

The cost of a special call sign would be $25 initial fee, with a charge of $10 upon license renewal. The special call sign would expire at the same time as the license of the amateur. The renewal fee would ensure that the program would continue to function and be self-supporting after the initial rush of call sign requests is filled.

Secondly, the liability of the SCSC must be limited to the fee charged and that the Commission must clearly establish that there is no entitlement to the use of a particular call sign, even if it was previously held; and that there can be no liability to anyone arising from the denial of a particular call sign.

In order to assure fairness, all licensees be informed of the program. The League's comments recommend a one-time mailing by the FCC to all licensees announcing the program. The ARRL, as SCSC, would provide the material for this mailing as well as provide publicity via the amateur press.

In conclusion, the League's comments state: "the demand for specific call signs in the Amateur Radio Service is significant; a special call sign program is an amenity which should definitely be provided. It is proper that the Commission should provide this service, on a cost-reimbursed user fee basis. Should the Commission nevertheless determine that the assignment and issuance of call signs.. be delegated, then the League should be the sole entity involved in the non-FCC portion of the program."

The FCC has informally indicated that this inquiry is considered to be a high priority item and some sort of action will probably take place in the spring of 1988.

(From The ARRL Letter)

ARE YOU SET FOR SET YET?

The 1987 ARRL Simulated Emergency Test (SET) is scheduled for October 17-18. This is an important exercise that will give the Amateur Radio Emergency Service (ARES) a chance to practice communication skills under simulated emergency conditions.

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WSBN	YES	3985	2230Z	1730	WB9ESM
WNN	YES	3723	2300Z	1800	N9DGL
WSSN	YES	3645	2330Z	1830	N9BDL
WIN-E	YES	3662	0000Z	1900	WB9ICH
WIN-L	YES	3662	0300Z	2200	KC9CJ
NWTN	YES	34/94	2330Z	1830	W9ZZM
WCWTN	YES	31/91	2330Z	1830	NK9L
GR.BAY	NO	72/12	0145Z	2045	WB9NRK
			THU.	WED.	
RACES	NO	3993.5	1715Z	1215	WC9AAG
		USB TUE. & THUR.			
RACES	NO	3993.5	1300Z	0800	WA9OAY
		LSB SUN.			

Section Manager's notes

July 1987

Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee WI 53221

Special congratulations to 18-year-old Scott Young, N9FZS, of Colby, for receiving the ARRL Hiram Percy Maxim Award of $1,000 cash plus travel and accomodation expenses to attend an ARRL Convention to formally receive a plaque. Scott will use the cash toward tuition to study E.E. at M.S.O.E.

Four Lakes ARC has qualified to renew their Special Service Service Club status; info on SSCs and ARRL Affiliated Club benefits is available from KA9FOZ.

New officers of Greater Milwaukee DX Association: Pres. K9CJK; V. Pres. N9AW; Sec./Treas. N4TZ. GMDXA welcomes new members, try repeater on 224.06 MHz or Net 9 p.m. Mondays and Thursdays on 147.36 MHz.

New officers W/K ARC of greater Milwaukee: Pres. WA9TZE; Sec./Treas. KA9TEP.

Awards Manager KY9P at Ozaukee RC reports KA9SPD awarded VUCC on 432 MHz and WA9OKB 6-meter WAS.

Wisconsin Chapter 55 QCWA meeting is October 3rd with a lunch and auction at the Liberty Club in Kimberly.

Badger Examiners exam October 17th, St. Nicholas Parish, 5353 North Green Bay Ave., Milwaukee, 1 p.m., reservations with KB9G.

October 25th, Kettle Moraine Radio Amateur's Ham, Computer and Video Fest, Waukesha Exposition Center, Highways J and FT, 8 a.m.

Thanks to communicators who worked hard, under the direction of EC WB9SMM, to make the Milwaukee City of Festivals and Circus Parades successful.

Sorry to report Silent Keys WB9RYO of Beaver Dam, K9HJ of Milwaukee, and W9KJU of Lake Geneva.

KB9YY is forming ARES group in Rock County, please let him know of any available volunteers.

CAND REPORT FOR JULY 1987 X 594 MESSAGES IN 31 SESSIONS X D9RN REPORTED 100 PERCENT X WISCONSIN STATIONS KA9USV WD9WYS W9CBE W9IEM W9ODV N9BGE AND KA9RII X 73 - JERRY W5KLV CAND MANAGER.

Universal Traffic Queries

By Gene Santoski, K9UTQ
1220 18th Avenue South
Wisconsin Rapids WI 54494

As Section Traffic Manager for Wisconsin, one of my responsibilities is to provide training in the art of traffic handling and net operations. I wish I had the time available to speak personally to everyone about the importance of traffic handling and how to go about it. However, due to job and family commitments, along with other outside interests, this just isn't possible. So, I have to resort to other methods of getting the work done.

In the past, I have held "on-the-air" training sessions, have appeared at some club meetings, and have talked to many individuals at hamfests and swapfests. A lot of questions are asked of me about various aspects of traffic handling and how to get started in it.

I have also implemented a program whereby I select individuals with experience in traffic handling know as Traffic Training Assistants (TTAs) to go out amongst the Hams in their respective areas and "preach" traffic handling. This has not worked as well as I would like. Such activity has been quite lacking.

Therefore, I have decided to try another avenue or way to channel this information to the largest number of Hams. What better way than by utilizing the widely read paper - Badger State Smoke Signals!

Thus, beginning with this edition, I will attempt to provide answers to the most often asked questions about traffic handling. I will use a question and answer format for this column, which will hereafter appear monthly until I run out of questions - which should take some time. I encourage you newcomers to Amateur Radio to read these columns and give traffic handling a try. Believe me, once it gets in your blood, it is hard to get rid of. Actually, I don't know why anyone would want to rid themselves of such a worthwhile activity. I also hope that you seasoned traffic handlers out there will also read this column, if for no other reason than just to get a good review and refresher course in traffic handling.

I want to also invite you readers to submit to me any questions that you may have about any aspect of traffic handling and net operating. I will attempt to answer them in this column. By the time I get through all the questions, you should have a good, solid background on all the ins and outs of this important aspect of the great hobby you and I both enjoy.

So, let's get started.

WHEN AND HOW DID ALL THIS TRAFFIC AND NET STUFF GET STARTED?

Well, way back in the earliest days of radio, a means of facilitating the relaying of messages across the continent was needed.

On December 31, 1915, William Kirvein, 9XE, had originated a message with the idea of covering the United States with it in the shortest possible time. The success of this experiment then led to the planning and announcement of a gigantic test to be held on February 22, 1916. Under the plan, a message was originated by Col. Nicholson of the Rock Island (IL) Arsenal, addressed to the Governors of every state in the Union and to President Wilson. Select transmitting stations were appointed all over the country. When the results were tabulated, it was found that the message had been delivered in 34 states and the District of Columbia. The Pacific Coast received it in 55 minutes, the Atlantic

(continued on page 15)

Shawano County Park is on Shawano Lake's north shore, 4 miles north of Highway 29, near County Highway HHH.

Facilities for camping, boating and swimming

Picnic begins at Noon
WNA Meeting at 1:00 p.m.

Prizes - Refreshments
Awards - Mini-Swapfest

You do NOT have to be a traffic handler or WNA member; ALL ARE WELCOME!!

THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)
P.O. Box 436 Cedarburg, Wisconsin 53012-0436

Changes At KEC'S PBBS.....

Roy has been working overtime at his station and promises to put away the soldering iron, at least for a while. If you have been monitoring 145.01 you probably have noticed that the PBBS is completely gone from that frequency, including the forwarding file capability. The newest system configuration is as follows:

WA9KEC-2 / KEC is the Net/Rom on 145.01
WA9KEC-3 / KECB is the Net/Rom on the backbone.
WA9KEC-4 / KECS is the Net/Rom to the PBBS.

KU9L BBS Antenna Change.....

As soon as the weather cooperates and I don't have to work much overtime, the BBS will be using a Ringo II ant at about 55 feet. It will be side mounted on the tower, so it won't be omni-directional at least to the southeast (according to the log statistics, that is where there are fewest checkins - besides anyone from that area can use W9HRF DIGI). An omni wont have the gain and the range that the Jr Boomer had, but will stop me from scheduling beam directions and let anyone check in at any time. I plan to continue running the Mirage B1016 at reduced power of 80 watts and 10 db preamp to the receiver. If anyone has any suggestions or comments, please few free to leave me a note on the BBS or others.

Dave - KU9L

Net/Rom Editorial.....

This year's most noticeable development in packet radio has been the release of digipeater 'store and forward' systems. Although several systems have been developed, in Wisconsin, the popular choice has been Net/Rom. Net/Rom allows a user to connect to the digipeater. Two choices are then available to the average user: 1. The user can connect to another Net/Rom digipeater (and build a path to the destination) or the ultimate destination (either directly or thru digipeaters without Net/Rom); 2. The user can select a 'node' from the Net/Rom digipeater's node file. This latter feature will connect the user to the selected 'node' without the user having to select the path.

The first Net/Rom installed in Wisconsin was at WA9FIO-1 in La Crosse about two months ago. It is to the point now that a new 'node' comes online every couple of days. As with all new developments, wrinkles develop and Net/Rom is no exception.

Most of these Net/Rom digipeaters sport impressive 'node' directories, in fact, I listed one the other day that had two dozen nodes listed - from Kentucky to Nebraska to Canada! As a test, I attempted to connect to the listed nodes. Guess what, only seven actually worked and the farthest I got was northern Illinois and eastern Minnesota! Now, I ask you, what is the point of listing 'nodes' that won't work 100% of the time? The whole idea of Net/Rom was to provide more reliable paths.

While there are some individuals developing 'backbone' systems on 220 and 440 MHz, the majority of Net/Rom stations are parking on 145.01. Backbone networks are definitely the proper course of action, taking as much off 145.01 as possible - especially long haul connects. Unless the station is a reliable dedicated digipeater, adding Net/Rom could actually hinder communications within the state. As more nodes come online, the potential for problems increases and someone toying with the idea of adding Net/Rom to a TNC should consider if it will actually help their area.

Lets trim the node listings to only 100% reliable paths. Granted, it won't look as impressive, but, it will work! If you are considering adding Net/Rom, talk with people that can offer competent suggestions. A great source of information and help can be obtained thru the gang at W.A.P.R. (at the address above) as several members pioneered Amateur packet radio in the Midwest and keep up with the latest developments and ideas. Net/Rom can supply higher reliability in packet communications provided it is not abused.

de Steve - WB9ZRE

WB9MJN Mailbox QSYed To 220.....

With the proven reliability of the 220 equipment at K9VXW-2, I have QSYed my mailbox to the 9600 baud 220 link channel for the periods of time it was normally on 145.01 . To connect to the mailbox, use your local Net/Rom to route to K9VXW-2 (instead of -1) and tell K9VXW-2 to connect to WB9MJN. If you are using a digi route, use via K9VXW-1,K9VXW-2, after the last digi in the string you were previously using.

73, Don

TIPS ON HANDLING NTS TRAFFIC BY PACKET RADIO
(From ARRL Field Forum)

Listing Messages

* After logging on to your local NTS-supported bulletin board,type the command LT, meaning List Traffic. The BBS will sort and display an index of all NTSXX traffic awaiting delivery. The index will contain information that looks something like this:

MSG#	TR	SIZE	TO	FROM	@BBS	DATE	Title
200	TN	282	NTSMA	KY1T		870225	QTC 1 Hart
198	TN	302	NTSWI	K1CE		870224	QTC 1 Iola
192	TN	215	NTSIA	WF4R		870224	QTC 1 Ames
190	TN	200	NTSWY	AJ6F		870224	QTC 1 Oats

Receiving Messages

* To take a message off the Bulletin Board for telephone delivery to the third party, or for relay to a NTS Local or Section Net, type the R or RT command, meaning Read Traffic, and the message number. R 190 will cause the BBS to find and send the message text file containing the RADIOGRAM for the third party in Waterburg. The RADIOGRAM will look like any other, with preamble, address, text and signature, only some additional packet-related message header information is added. This information included the routing path of the message for auditing purposes; e.g. to discern any excessive delays in the system.

* After the message is saved to the printer or disk, the message should be KILLED by using the KT command, meaning Kill Traffic, and the message number. In the above case, at the BBS prompt, type KT 190. This prevents the message from being delivered twice.

* At the time the message is killed, many BBS's will automatically send a message back to the station in the FROM field with information on who took the traffic, and when it was taken!

Delivering or Relaying A Message

* A down loaded RADIOGRAM should, of course, be handled expeditiously in the traditional way: telephone delivery, or relay to a phone or cw net.

Sending Messages

* To send a RADIOGRAM, use the ST command, meaning Send Traffic.The BBS will prompt you for the NTSXX address (NTSOH), for example,the message title which should contain the city in the address of the RADIOGRAM (QTC 1 Dayton), and the text of the message in RADIOGRAM format. The BBS, usually within the hour, will check its outgoing mail pouch, find the NTSOH message and automatically forward it to the next packet station in line to the NTSOH node. Note: Some states have more than one ARRL Section. If you do not know the destination ARRL Section ("Is San Angelo in the ARRL Northern, Southern or West Texas Section?"), then simply use the state designator NTSTX.

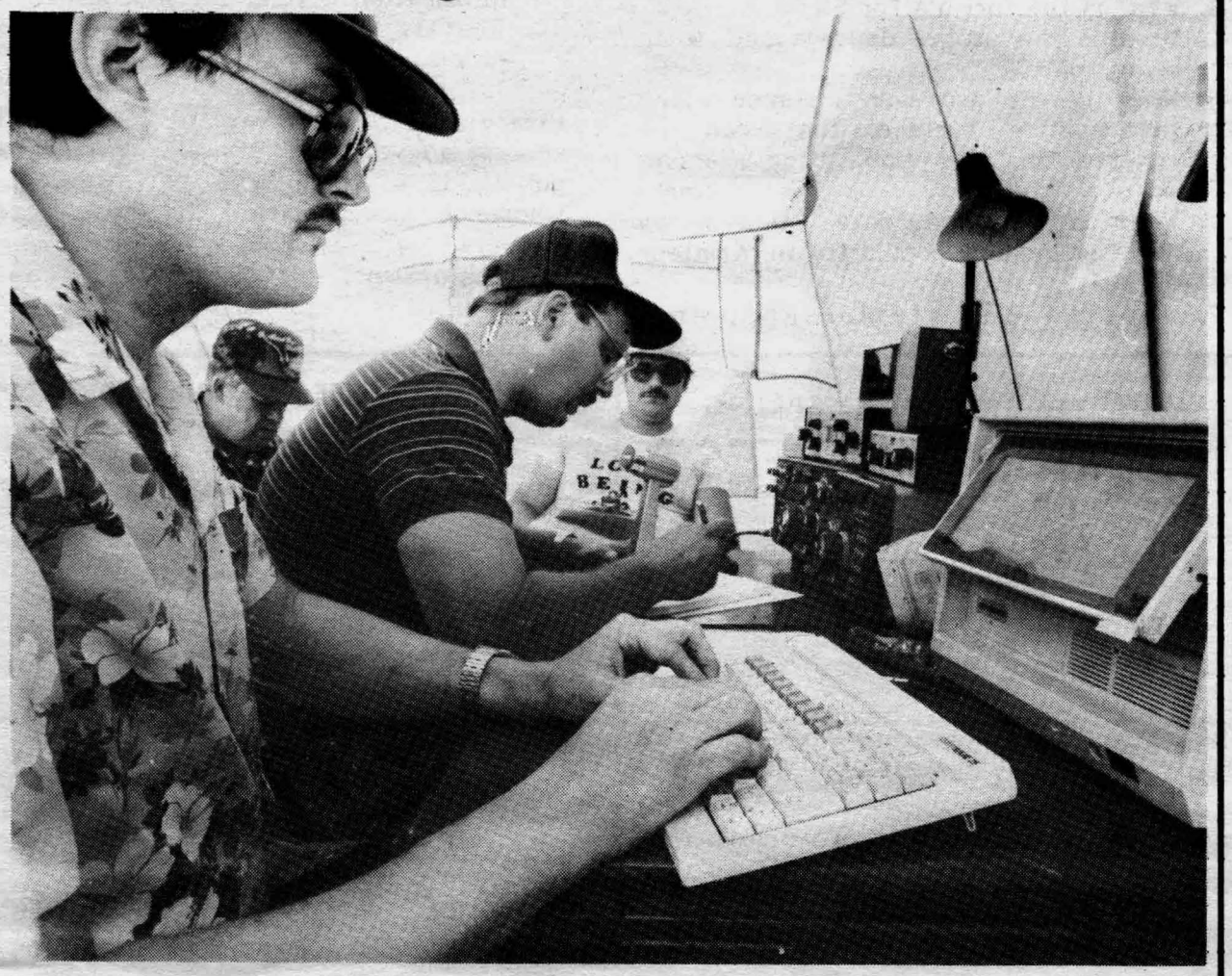
* Note: While NTS/packet radio message forwarding is evolving rapidly, there are still some gaps. When uploading an NTS message destined for a distant state, use handling instruction 'HXC' to ask the delivering station to report back to you the date and time of delivery.

* Unbundle your messages please: one NTS message per BBS message. Please remember that traffic eventually will have to be broken down to the individual addressee somewhere down the linefor ultimate delivery. When you place two or more NTS messages destined for different addressees within one packet message,eventually the routing will require the messages to be broken up by either the BBS SYSOP or the relay station, placing an additional, unreasonable burden on them. Therefore it is good practice for the originator to expend the extra word processing in the first place and create individual messages per city regardless if there are common parts of other messages. This means that book messages are not suitable in packet at this time unless they are going to the same city. Bottom line: Messages should be sent unbundled. (Tnx NI6A for this tip)

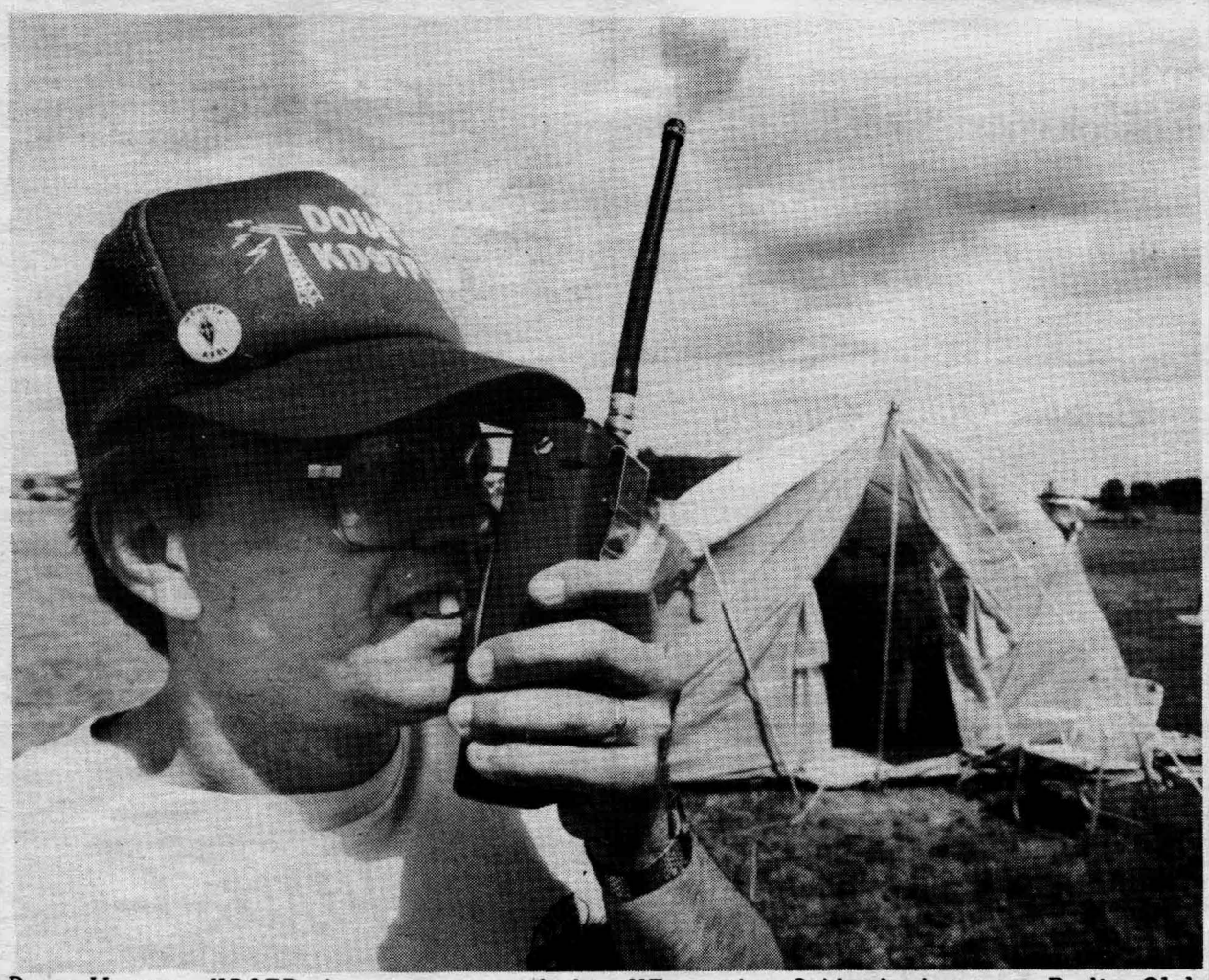
We Want You! (continued on page 4)

Field Day 1987

Oshkosh Amateur Radio Club



Operating at the Oshkosh Amateur Radio Club Field Day site are, left to right, John Kaiser, KD9BC; Harry Hartmann, N9GDY; Steve Whitton, KD9WQ; and Terry Schilling, N9AOT.



Doug Warner, KD9TP, hams it up with his HT at the Oshkosh Amateur Radio Club Field Day site.

-- Photos courtesy of the Oshkosh Northwestern

WNA (continued from page 13)

Coast in 60 minutes. New Orleans and Canada each had received it in 20 minutes. The success of this test created enthusiasm for a traffic handling system to cover the entire country.

In March, 1916, ARRL (American Radio RELAY League) Trunk Line Managers for four of the six routes were appointed. Test messages were to be sent each Monday night. The objective of each trunk line manager was to see how far these messages could be relayed on each successive main drill. By year's end, more than 150 cities were linked by these main trunk lines, with branch lines completing national coverage. (NOTE: This same thing is being established with Packet Gateway stations today).

Almost the entire interest of Amateur Radio at this period seems to have been in the development and improvement of operating practices and techniques (just like Packet today). This great body of organized hobbyists swept into the year 1917 bent on accomplishing one long-hoped-for objective - the first TRANSCONTINENTAL relay! To help the cause, new tools had been released for their use. Among these was the complete audion regenerative receiver for amateurs, offering sufficiently increased sensitivity and range to make an actual transcontinental relay possible.

The first attempt on January 4, 1917 was broken up by static. On January 27th, the great feat was finally accomplished!

This accomplishment was quickly over-shadowed by a greater one. On February 6th, a message was started from the East Coast, relayed to the West Coast, and an answer received in the record time of 1 hour and 20 minutes!!

In April, 1917, a letter was received by all Amateurs from the office of Chief Radio Inspector of the Department of Commerce to "shut down all radio operations until further notice!" The country was at war! This was quite a blow to the Amateur fraternity, to say the least. This ban remained in effect until September 1919, when the Director of Naval Communications Service (the new governing body of Amateur Radio) announced the removal of all restrictions on Radio Amateurs.

A wave of wild enthusiasm swept the country! Before November, 1919, Amateur Radio was back in action.

In mid-January, 1921, the first official postwar transcontinental relay tests were again held, following three months of careful planning and organization. Test messages were sent for four nights. On the final night, five messages were transmitted. The third one made a record that established Amateur Radio as the fastest cross-country channel of public communications - 6 1/2 minutes round-trip elapsed time. By the mid-thirties, there were 14 Trunk Lines criss-crossing the country, and interest had never been higher.

Again, war came and suspended all such activity.

After the war in 1945, the trunk lines were once again set up, but operating techniques had changed and many were dissatisfied with the system. So, in 1949, the present-day National Traffic System was established. After a few shaky years in the beginning, the NTS soon became stabilized and has since become an established part of Amateur Radio public service efforts. It has been said that the NTS is the tightest and most solid organization in the ARRL framework.

So there you have the roots of our present-day NTS.

See you next month, Gene, K9UTQ

Unusual Trivia Quiz



By Gene Santoski, K9UTQ
1220 18th Avenue South
Wisconsin Rapids WI 54494

QUIZ NO. 8 IN A SERIES

1. What is the emission designator for phase-modulated telephony?
2. What is the time difference between CDST and UTC?
3. What is the formula for SWR?
4. What is the proper distress call when using voice?
5. What is the maximum distance along the earth's surface that can be covered in one hop using E-layer skip?
6. What high speed data transmission mode is gaining popularity in Amateur Radio?
7. What League station appointee observes signals for quality and frequency?
8. What is the name of a Benton Harbor based company that manufactures electronic kits?
9. Who is the current ARRL Public Information Officer for Wisconsin?
10. What is the fifth part of a message preamble?

Please send your answers to K9UTQ at his address above. After 12 quizzes have been published, a prize will be awarded to whomever has submitted the most correct answers.

The answers to the August quiz can be found on page 7 of this issue.

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